AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in this application.

Listing of the Claims:

1. (Currently amended) A radioactive transition metal-imido hetero-diphosphine complex compound of formula (I):

$$[(Me{=}N\text{-}R)L^1L^2]^+Z^- \qquad (I),$$

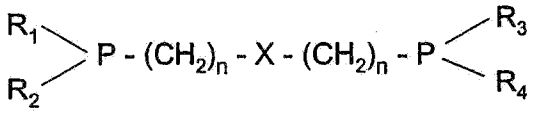
wherein:

Me is a radioactive transition metal selected from the group consisting of ^{99m}Tc, ^{186}Re, ^{188}Re;

R is ~~a C_1-C_{15} linear or branched alkyl or alkenyl residue~~ selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, isobutyl, octyl, decyl, dodecyl, propenyl, butenyl, pentenyl, phenyl, benzyl, tolyl, 4-methoxy-benzyl, 4-ethoxy-benzyl, and salicyl, ~~optionally interrupted by -O-, -S-, -N(R'), where R' = H or C_1-C_6 alkyl. and/or optionally substituted with halogen, hydroxyl, C1-C5 alkoxy, carboxy, ester, thiol, primary or secondary amino or amido, groups, or R is phenyl or an aryl residue, being R optionally substituted with a biologically active substance, wherein said biologically active substance is~~ wherein R is substituted with a biologically active substance, said substance being a catecholamine selected from the group consisting of dopamine, L-DOPA, 3-hydroxytyramine, optionally conjugated, via peptide bond, to another biologically active substance selected from the group consisting of sugars, amino acids, fatty acids, vitamins, hormones, peptides, and catecholamines ~~selected among sugars, amino acids, fatty acids, vitamins, hormones, peptides, catecholamines; said~~

~~catecholamines being optionally conjugated, via peptidic bond, to the other above mentioned biologically active substances~~

L^1 is a tridentate hetero-diphosphine ligand of formula (II):



(II),

wherein:

R^1, R^2, R^3 and R^4, which may be the same or different, have the same meanings as R;

X is oxygen, sulphur, NR^5, wherein R^5 is hydrogen or R;

n is an integer ranging from 1 to 5;

L^2 is a bidentate ligand, which comprises a combination of two donor atoms, selected from the group consisting of oxygen, sulphur and nitrogen, said atoms being preferably negatively charged and being separated by a spacer of 2 to 4 members, said spacer being an aliphatic chain or part of an aromatic ring, L^2 being optionally conjugated to a biologically active substance as above defined;

Z^- is a mononegative counter-ion selected from the group consisting of Cl^-, Br^-, OH^-, ClO_4^-, EtO^-, tetrafluoroborate.

2. (Original) A radioactive transition metal-imido hetero-diphosphine complex according to claim 1, wherein the radioactive transition metal is ^{99m}Tc.

3-4 (Canceled)

5. (Currently Amended) A complex according to ~~claim 4~~ claim 1, wherein dopamine is conjugated to vitamin H.

6. (Previously presented) A radioactive transition metal-imido hetero-diphosphine complex according to claim 1, wherein L^1 is selected from the group consisting of:

$(C_6H_5)_2PCH_2CH_2N(H)CH_2CH_2P(C_6H_5)_2$;

$(C_6H_5)_2PCH_2CH_2N(CH_3)CH_2CH_2P(C_6H_5)_2$;

$(C_6H_5)_2PCH_2CH_2N(CH_2CH_2OCH_3)CH_2CH_2P(C_6H_5)_2$;

$(CH_3)_2PCH_2CH_2N(CH_3)CH_2CH_2P(CH_3)_2$;

$(C_6H_5)_2PCH_2CH_2SCH_2CH_2P(C_6H_5)_2$;

$(C_6H_5)_2PCH_2CH_2OCH_2CH_2P(C_6H_5)_2$.

7. (Original) A radioactive transition metal-imido hetero-diphosphine complex according to claim 1, wherein L^2 comprises a combination of two electron-donor atoms selected from the group consisting of $[O^-,O^-]$, $[N^-,O^-]$, $[S^-,O^-]$, $[N^-,N^-]$, $[N^-,S^-]$ and $[S^-,S^-]$, said atoms being separated by a 2 to 4 membered spacer, wherein said spacer is an aliphatic chain or part of an aromatic ring.

8. (Previously presented) A complex according to claim 7, wherein L^2 is selected from the group consisting of catecholate$^{(2-)}$; carbonate$^{(2-)}$; 1,2-phenylenediaminate$^{(2-)}$; 1,2-benzenedithiolate$^{(2-)}$; ethyleneg1ycolate$^{(2-)}$; ethylenediaminate$^{(2-)}$; ethylenedithiolate$^{(2-)}$; 1,2-aminophenolate$^{(2-)}$; 1,2-aminothiophenolate$^{(2-)}$; thiosalicilate$^{(2-)}$; 1,2-aminoethanolate$^{(2-)}$.

9. (Previously presented) A complex according to claim 7, wherein L^2 is conjugated to a catecholamine selected from the group consisting of dopamine, L-DOPA, 3-hydroxytyramine, optionally conjugated to another biologically active substance selected from the group consisting of sugars, amino acids, fatty acids, vitamins, hormones, peptides, and catecholamines.

10. (Original) A complex according to claim 9, wherein dopamine is conjugated to vitamin H.

11. (Original) A radioactive transition metal-imido hetero-diphosphine complex according to claim 1, wherein Z^- is Cl^-, $C1O_4^-$, EtO^-, tetrafluoroborate.

12-15 (Canceled)

16. (Previously presented) A radioactive transition metal-imido hetero-diphosphine complex of claim 1 for use in radiodiagnostic imaging.

17. (Previously presented) A radioactive transition metal-imido hetero-diphosphine complex of claim 1 for use in radiotherapy.

18. (Previously presented) A pharmaceutical composition comprising a radioactive transition metal-imido hetero-diphosphine complex of claim 1 in admixture with pharmaceutically acceptable carriers and/or excipients.